

FIG. 1

20251202 22:02:15.02

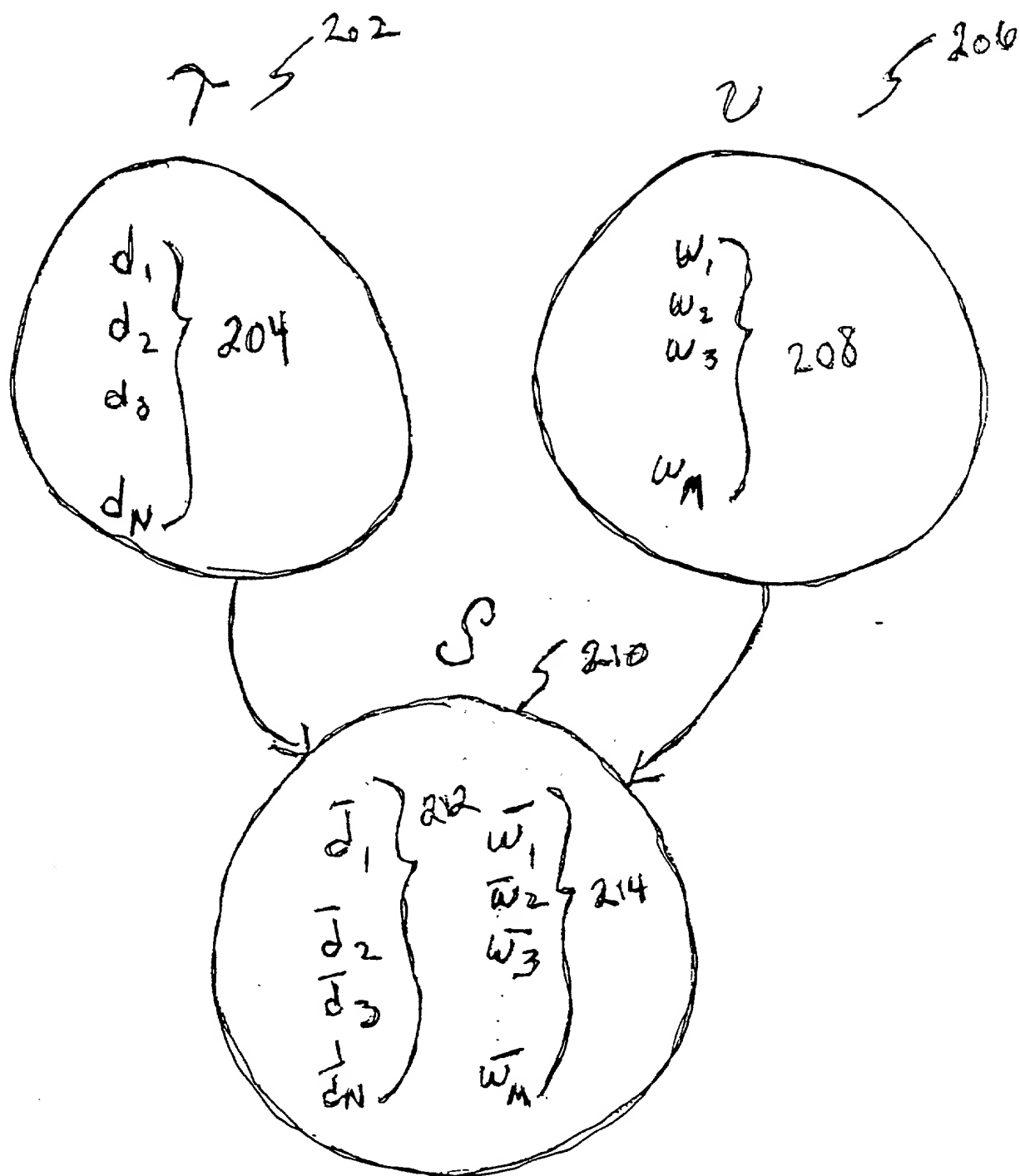


FIG. 2

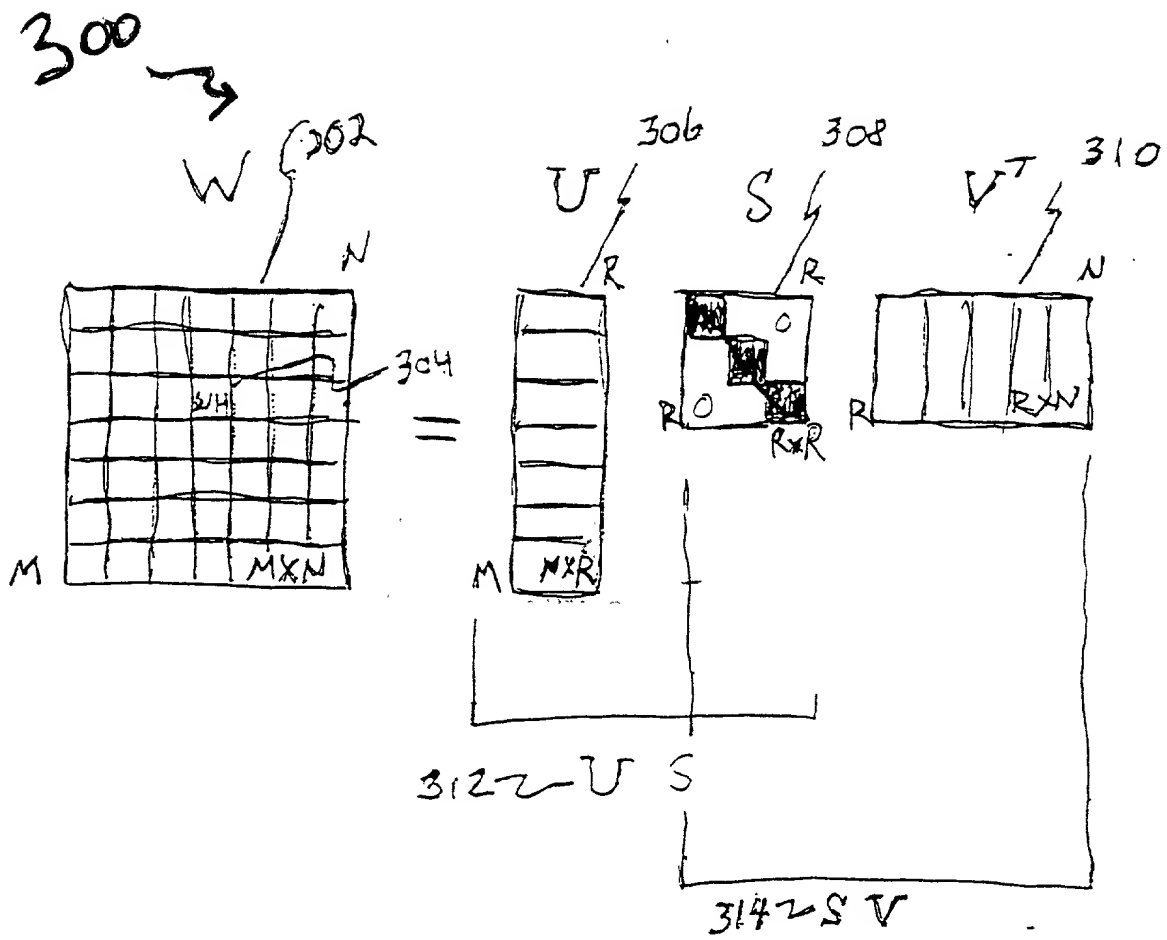


FIG. 3A

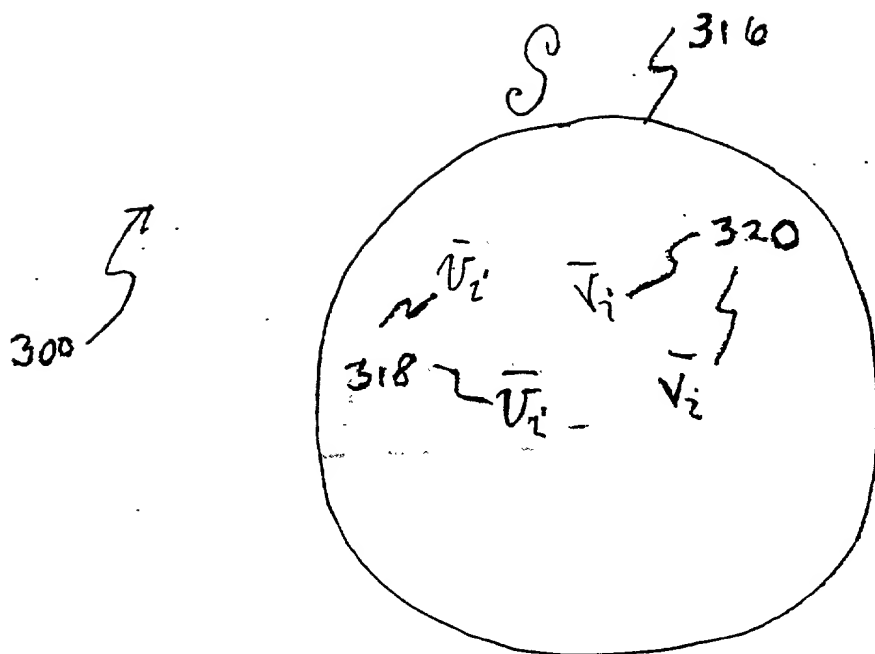


FIG. 3B

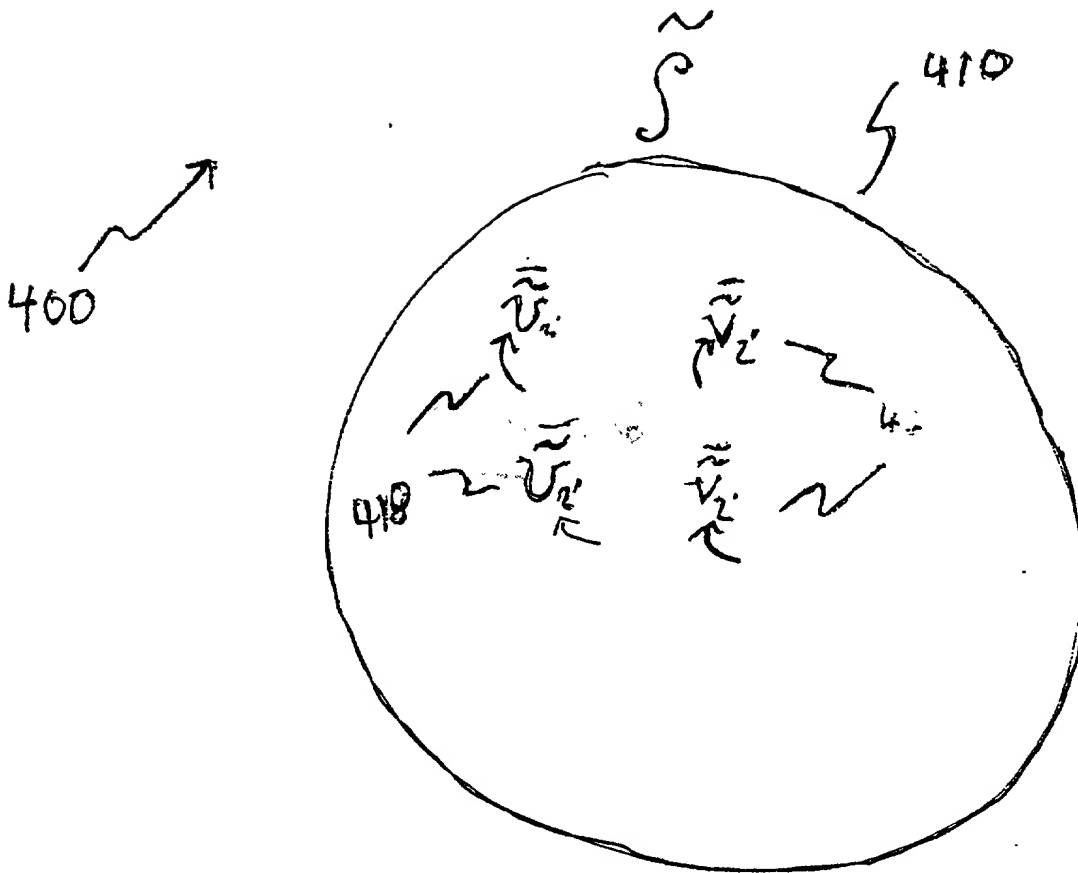
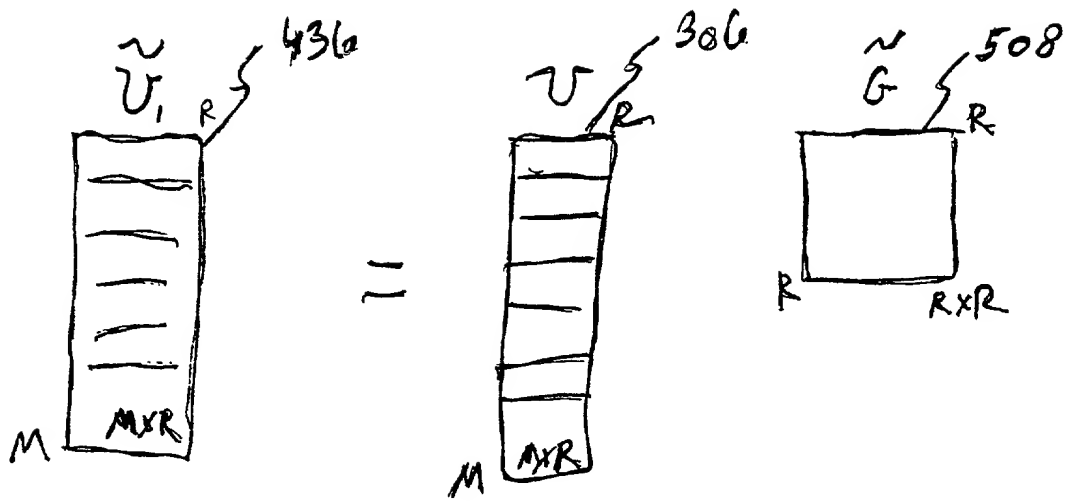
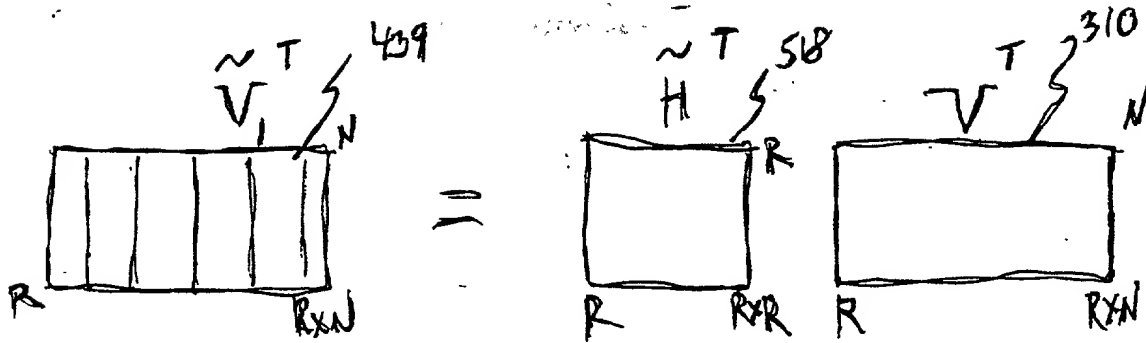


FIG. 4B



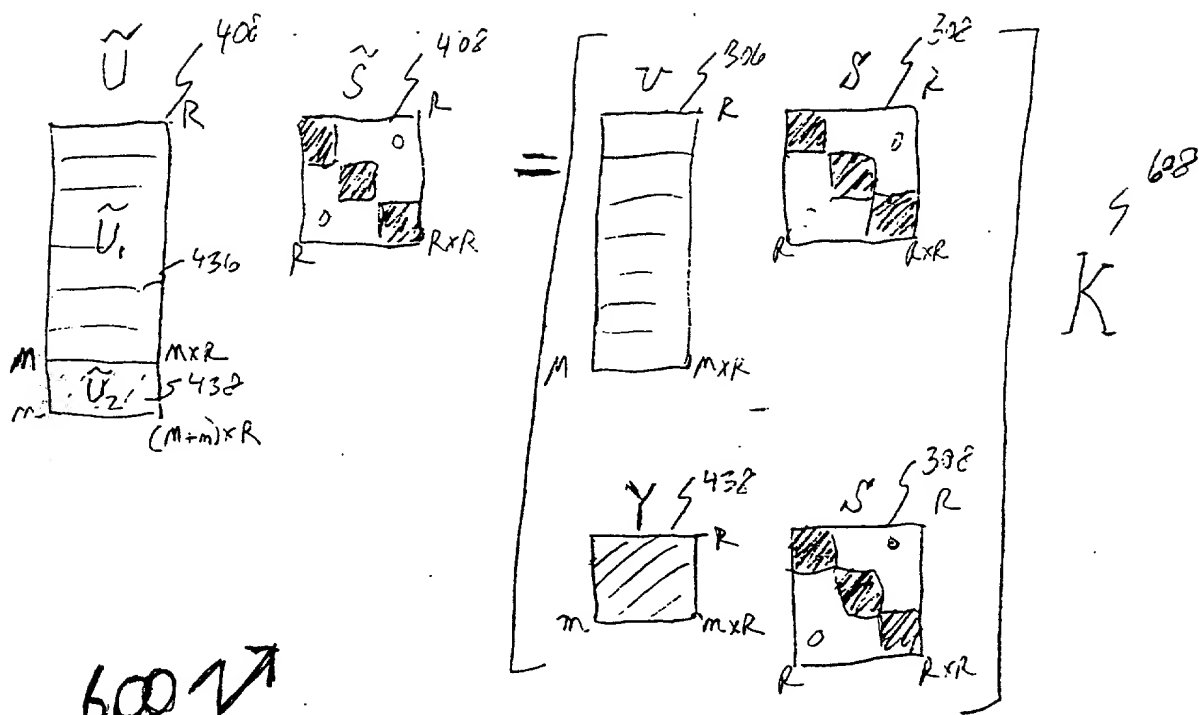
500 ↗

FIG. 5A



↗
500

FIG. 5B



600 ↗

FIG. 6A

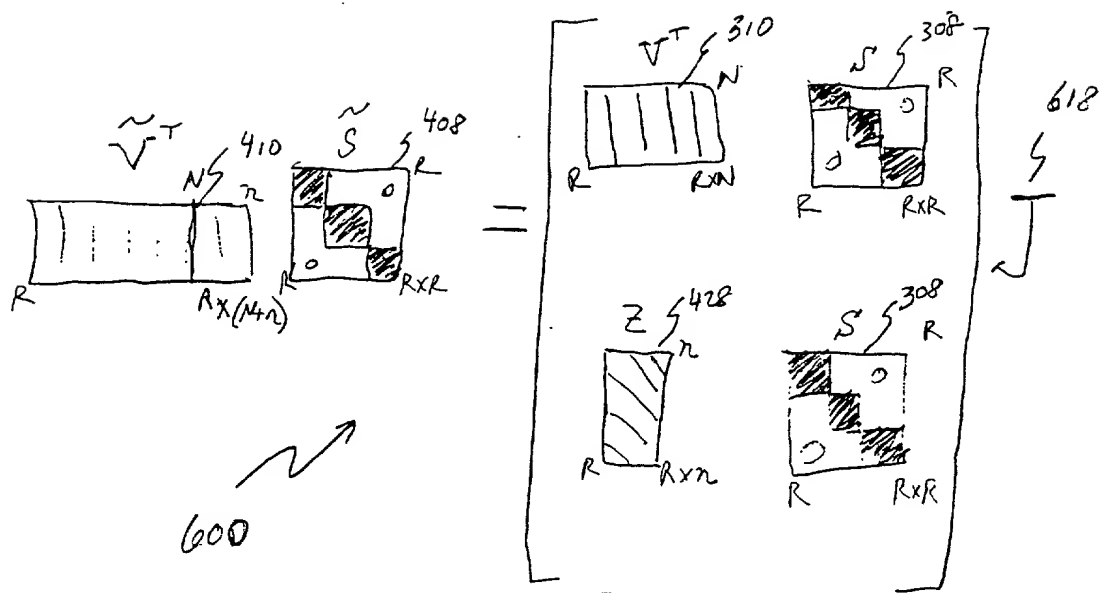
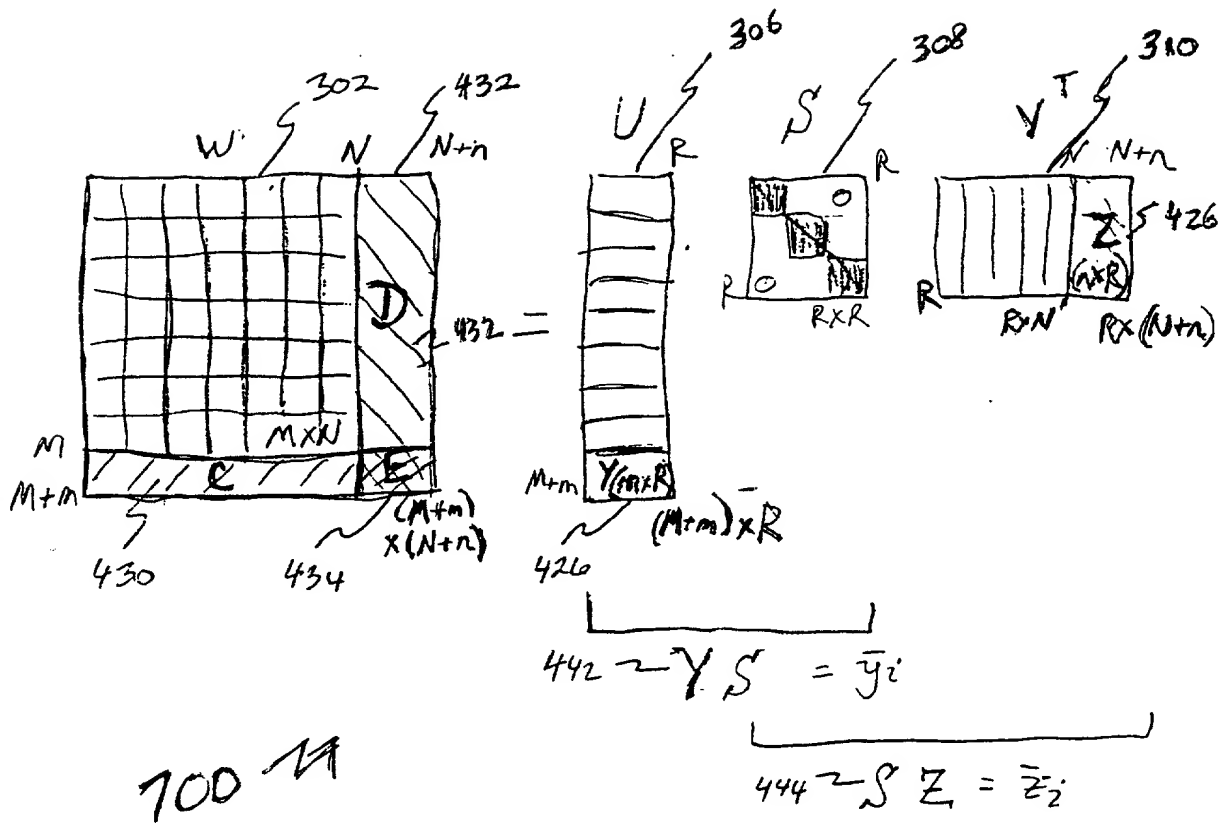
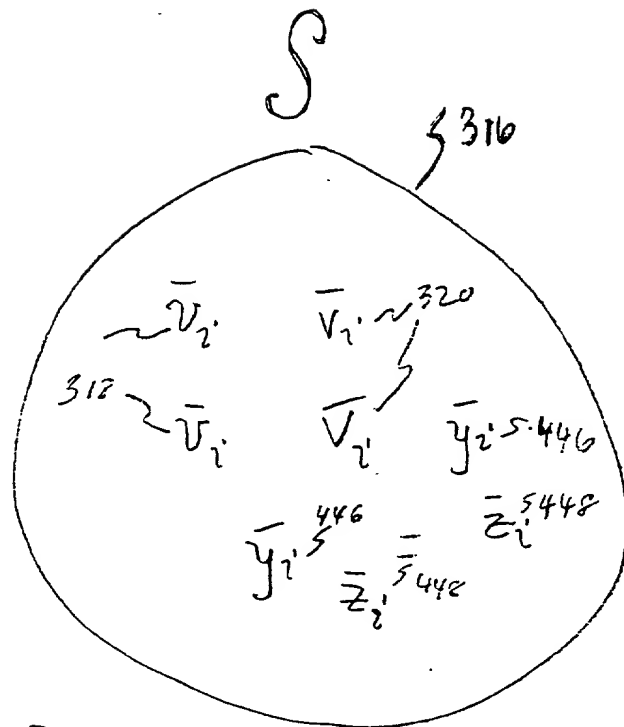


FIG. 6B



09957072-024502



700 \rightarrow

FIG. 7B (PRIOR ART)

810

GENERATE ORIGINAL LSA SPACE
FROM SVD OF WORD-DOCUMENT
CORRELATION MATRIX W
INTO ORIGINAL MATRICES U , S , AND V

820

GATHER NEW WORDS AND DOCUMENTS IN EXTENSION
MATRICES C AND D ; FROM SVD OF C AND D , OBTAIN
EXTENSION MATRICES Y AND Z .

830

APPLY TRANSFORMATION MATRICES
 \bar{G} AND \bar{H}
TO ORIGINAL MATRICES, U AND V , AND EXTENSION
MATRICES, Y AND Z TO UPDATE THEM ACCORDING TO
THE NEW WORDS AND DOCUMENTS

840

DERIVE UPDATED WORD AND DOCUMENT VECTORS
 $\bar{U}S$ AND $\bar{V}S$
BY APPLYING TRANSFORMATION MATRICES J AND K TO
VECTORS US , YS , VS , AND ZS .

850

GENERATE ADAPTED LSA SPACE USING THE DERIVED
UPDATED WORD AND DOCUMENT VECTORS
 $\bar{U}S$ AND $\bar{V}S$

FIG. 8

900

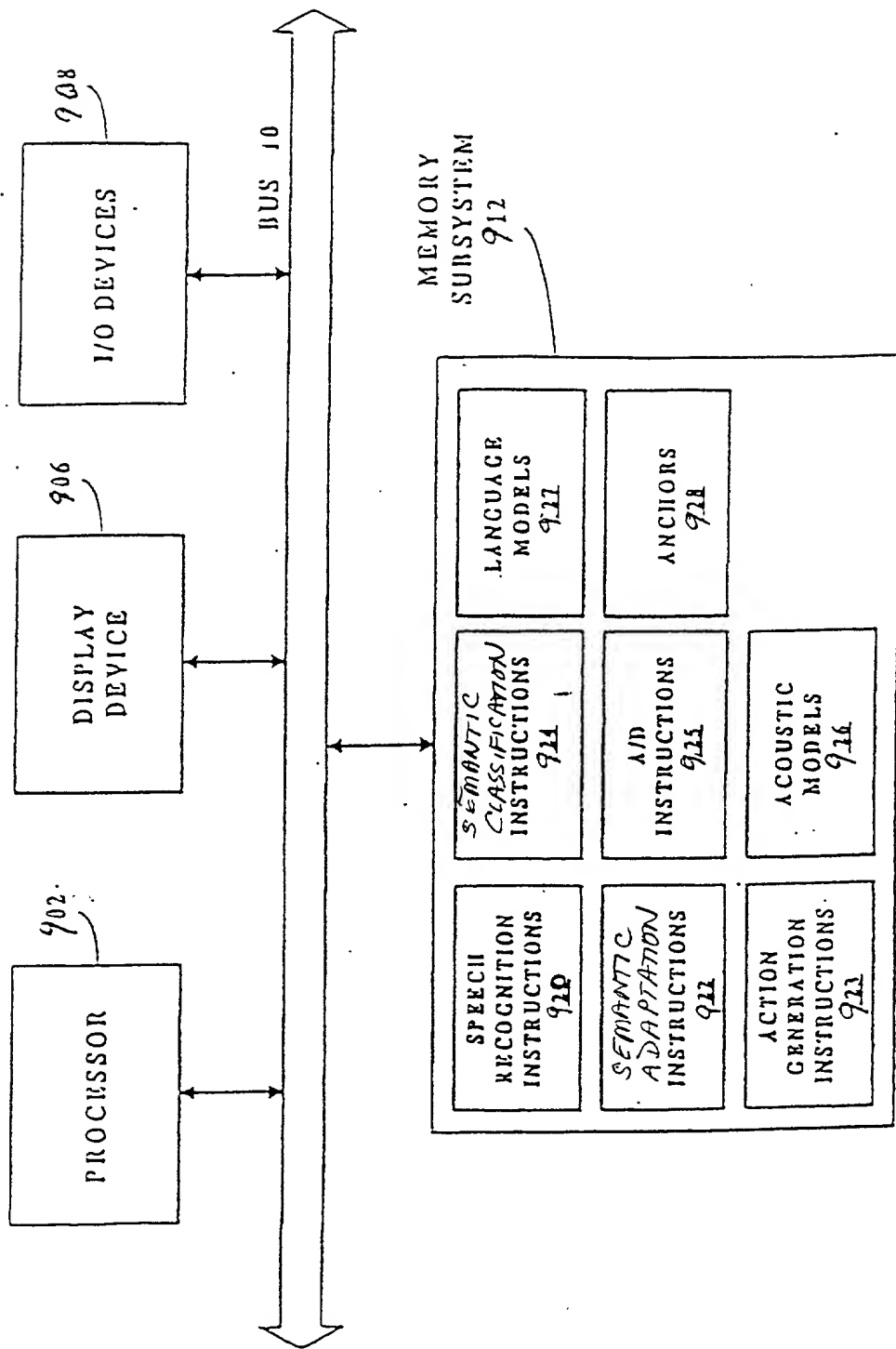


FIG. 9

2051.20.22029650

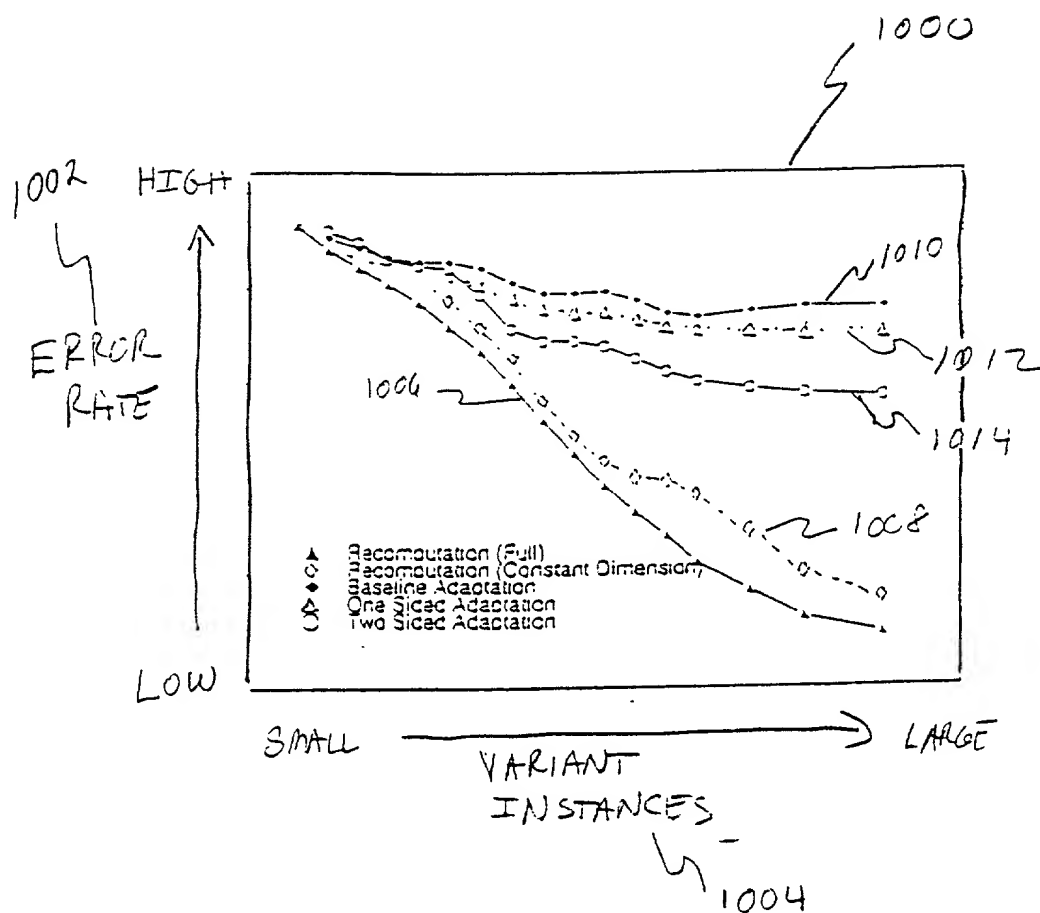


FIG. 10